2002). Scaphiopus holbrookii was only found to be breeding in one additional pond within the Maple Flats Pond Complex. During the first week of April, four males and one female entered Pond 2, which was completely encircled by a drift fence and pitfall trap array. The clutch from this single female hatched successfully but no metamorphs were found at the drift fence. Because Pond 2 retained water until early June, we suspect that predation by ambystomatid salamander larvae explains the mortality of spadefoot tadpoles in this pond.

### LITERATURE CITED

Buhlmann, K. A., J. C. Mitchell, & L. R. Smith. 1999. Descriptive ecology of the Shenandoah Valley Sinkhole Pond System in Virginia. Banisteria 13: 23-51.

Burger, W. L. 1957. The eastern spadefoot – storm frog of eastern Virginia. Virginia Wildlife 18(8): 8-9, 22-24.

Corben, C., & G. M. Fellers. 2001. A technique for detecting eyeshine of amphibians and reptiles. Herpetological Review 32: 89-91.

de Rageot, R. H., A. Damalas, T. Gibbon, & B. Fox. 1969. Observations regarding three rare amphibians in Surry County, Virginia. Virginia Herpetological Society Bulletin 63: 3-5.

Gibson, J. D. 2002. Herpetofaunal survey of Sherando Lake Recreation Area, Loves Run Pond Complex, Green Pond, and Humpback Rocks. Catesbeiana 22: 3-13.

Hansen, K. L. 1958. Breeding pattern of the eastern spadefoot toad. Herpetologica 14: 57-67.

Jopson, H. G. M. 1984. Amphibians and reptiles of Rockingham County, Virginia. Catesbeiana 4(2): 3-9.

Merkle, D. A. 1977. The occurrence of the Eastern Spadefoot, *Scaphiopus h. holbrooki*, in the central Piedmont of Virginia. Bulletin of the Maryland Herpetological Society 13: 196-197.

Mitchell, J. C., & K. A. Buhlmann. 1999. Amphibians and reptiles of the Shenandoah Valley Sinkhole Pond System in Virginia. Banisteria 13: 129-142.

Mitchell, J. C., & K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Virginia

Department of Game and Inland Fisheries, Special Publication No. 1, Richmond, VA. 122 pp.

Pearson, P. G. 1955. Population ecology of the spadefoot toad, *Scaphiopus h. holbrooki* (Harlan). Ecological Monographs 25: 233-267.

Richmond, N. D. 1947. Life history of *Scaphiopus holbrookii holbrookii* (Harlan). Part I: larval development and behavior. Ecology 28: 53-67.

Tobey, F. J. 1985. Virginia's Amphibians and Reptiles: A Distributional Survey. Virginia Herpetological Society, Purcellville, VA. 114 pp.

Trautman, M. B. 1931. Another record of *Scaphiopus holbrookii* for Virginia. Copeia 1931: 63.

Don R. Church and Henry M. Wilbur Department of Biology University of Virginia Charlottesville, Virginia 22903

Steven M. Roble Virginia Department of Conservation and Recreation Division of Natural Heritage 217 Governor Street Richmond, Virginia 23219

Fred C. Huber and Michael W. Donahue George Washington and Jefferson National Forests 5162 Valleypointe Parkway Roanoke, Virginia 24019

Banisteria, Number 20, 2002 © 2002 by the Virginia Natural History Society

A LEUCISTIC NORTHERN DUSKY SALA-MANDER (DESMOGNATHUS FUSCUS) FROM VIRGINIA -- Albinism and its leucistic variation (individuals lacking integumentary pigment with normal eyes; Dyrkacz, 1981) have been reported for six species of amphibians in Virginia (Mitchell & Church, 2002, and references therein). Albino or leucistic salamanders reported from the Commonwealth include Northern Gray-cheeked Salamander (Plethodon montanus; originally reported as P. jordani), Peaks of Otter Salamander (Plethodon hubrichti), and Marbled Salamanders (Ambystoma opacum) (Hensley, 1959; Hayslett et al., 1998; Mitchell & Church, 2002). Albino leucistic Northern Dusky Salamanders

(Desmognathus fuscus) have been reported from Maryland (Harris, 1970), Massachusetts (Tyning, 1977), and West Virginia (Channell & Valentine, 1972). This short communication reports an instance of the leucistic form of albinism in D. fuscus from Virginia.

On 14 April 2002, a leucistic adult Northern Dusky Salamander was found in leaf litter under a rock in a small, wet ditch in Posey Hollow, Conservation Research Center (Smithsonian Institution), Warren County, Virginia. The rock was in shallow water and imbedded about 2 cm in the substrate. The adult salamander was 56 mm SVL, 48 mm tail length, and weighed 3.48 g. The dorsum and sides of the head, body, and tail were golden tan in color with sparse, irregular, tiny dark brown flecking. The closest color match in Smithe (1975) is salmon to cream, depending on the lighting. The middorsal field where there would normally be an irregular light stripe was light to medium apricot with scalloped edges formed by small dark brown flecks. The first 17 mm of the dorsum of the tail was apricot where there would normally be reddish pigment. For 13 mm posterior to this field there was an abundance of tiny black flecks. The last 10 mm of the tail was dark brown. The venter was translucent; internal organs were darkly pigmented and visible. The ventral side of the body and tail were uniform golden tan. The chin was uniform golden tan except for 6 dark brown flecks, and the venter had only a small amount of scattered dark brown ventrolateral flecking. The head had a moderate number of dark brown flecks and was a darker golden tan than the body. The irises of the eyes were black. The light eye-jaw stripe characteristic of Desmognathus was not visible. All of the feet were orange-tan dorsally and rose ventrally. The toes were tipped in dark brown.

The salamander was kept alive for photographs and then returned to the point of capture on the same day. Other salamanders found on the same date in Posey Hollow were *Desmognathus monticola*, *Gyrinophilus porphyriticus*, *Hemidactylium scutatum*, *Notophthalmus viridescens*, *Plethodon cinereus*, *P. cylindraceus*, and *Pseudotriton ruber*. All individuals captured, including other *D. fuscus*, had normal color and patterns.

The *D. fuscus* from Massachusetts was described as raw sienna or tawny ochraceous (Tyning, 1977). The illustration of this salamander in Bechtel (1995) shows it to be orange to orange-yellow (Smithe, 1975) without dark flecking but with dark irises. The one described above for Virginia differed primarily by having the tiny, scattered dark brown flecking and dark tail tip. The leucistic form of albinism apparently occurs rarely in *D. fuscus*, as this report is the fourth published for this plethodontid. It is the first documentation of a

leucistic phenotype in Virginia.

### **ACKNOWLEDGMENTS**

I thank the participants of the Smithsonian Institution's Conservation Research Center's Amphibian Monitoring Workshop for Teachers for catching the salamanders. Susan Lily took the photograph.

## LITERATURE CITED

Bechtel, H. B. 1995. Reptile and Amphibian Variants, Colors, Patterns, and Scales. Krieger Publishing Co., Malabar, FL. 206 pp.

Channell, L. S., & B. D. Valentine. 1972. A yellow albino *Desmognathus fuscus* from West Virginia. Journal of Herpetology 6: 144-146.

Dyrkacz, S. 1981. Recent instances of albinism in North American amphibians and reptiles. Society for the Study of Amphibians and Reptiles, Herpetological Circular 11: 1-31.

Harris, H. S., Jr. 1970. Abnormal pigmentation in Maryland amphibians and reptiles. Bulletin of the Maryland Herpetological Society 6: 21-27.

Hayslett, M. S., G. W. Wilson, & J. C. Mitchell. 1998. Natural history: *Plethodon hubrichti*. Albinism. Herpetological Review 29: 229-230.

Hensley, M. 1959. Albinism in North American amphibians and reptiles. Publications of the Museum, Michigan State University 1: 133-159.

Mitchell, J. C., & D. R. Church. 2002. Leucistic Marbled Salamanders (*Ambystoma opacum*) in Virginia. Banisteria 20: 67-69.

Smithe, F. B. 1975. Naturalist's Color Guide. American Museum of Natural History, New York, NY. 25 pp. (unpaginated).

Tyning, T. F. 1977. A yellow albino *Desmognathus fuscus fuscus* from western Massachusetts. Herpetological Review 8: 118.

Joseph C. Mitchell Department of Biology University of Richmond Richmond, Virginia 23173



Fig. 1. Leucistic Desmognathus fuscus from Warren County, Virginia.

# Miscellanea

# **Book Reviews**

Geometroid Caterpillars of Northeastern and Appalachian Forests, by David L. Wagner, Douglas C. Ferguson, Timothy L. McCabe, & Richard C. Reardon. 2001. Forest Health Technology Enterprise Team, Publication No. FHTET-2001-10, U.S. Department of Agriculture, Forest Service, Morgantown, WV. 239 pp. Available free of charge from Richard C. Reardon, USDA Forest Service, Forest Health Technology Enterprise Team, Morgantown, WV 26505, phone 304-285-1566; email: rreardon@fs.fed.us

This guide is yet another in a series of recent, excellent publications on forest Lepidoptera that have been published by the U.S. Forest Service's Morgantown, West Virginia office. Leading authorities on the faunas of the Northeast and Pacific Northwest regions have been recruited to prepare these guides (e.g., Wagner et al., 1997; Miller & Hammond, 2000; present volume), which are currently available at no cost until supplies are exhausted. At least one of the guides has been printed a second time due to popular demand. More (expanded) guides are reportedly in preparation. I reviewed Wagner et al. (1997) in a previous issue of *Banisteria* (number 12).

This 8.5 x 11 inch, glossy, soft-bound publication concerns the larval stages of nearly 200 geometrid moths that inhabit forests in the northeastern United States and the Appalachians. This is the second largest family (after Noctuidae) of macromoths in the region. Two species of Uraniidae (subfamily Epipleminae, formerly regarded as a distinct family) also are included. The guide is not intended to be a comprehensive treatment of the geometrid fauna of the region, but it is an excellent start. The emphasis is on tree and shrub feeders; forb and grass feeders are largely omitted. Despite possible public perception to the contrary, only a very small minority of forest moth species can be considered pests. The vast majority are important components of forest ecosystems, primarily serving as prey for various invertebrate and vertebrate predators, particularly birds and bats. Many species are important pollinators and some are nutrient recyclers.

The text is well written and virtually free of typographical errors. Brief introductory chapters concern the life cycle of moths, caterpillar morphology, collecting techniques (emphasizing beating), rearing (including a discussion of parasitoids), photography, specimen preservation, and taxonomy. End material includes a glossary, important references, host (larval food) plant index, and caterpillar/moth index.